

Appl. No. 10/605,537  
Response dated 8/19/2006  
Reply to Office Action of 8/10/2006

### **REMARKS/ARGUMENTS**

Claims 17-42 are pending in this Application. Independent claim 17 and dependent claim 22 have been amended. Claims 39-42 are new.

#### **Claim remarks with regards to 35 U.S.C. §112**

The Examiner has rejected claim 31 under 35 §112. Claims 19-20 and 31-38 have been canceled by this Amendment. Thus the Examiner's rejection of claim 31 under 35 USC § 112 is no longer applicable.

#### **Claim remarks with regards to 35 U.S.C. §102**

The Examiner has rejected claims 17-38 under 35 USC § 102(b) as being anticipated by Kricka et al. U.S. Patent No. 5,744,366 or by Kricka et al. U.S. Patent No. 5,296,375. Kricka does not comprise the structural limitations of the claim 17 as amended. Please see amended claim 17 above. As such, Kricka '366 or '375 are no longer applicable in view of the amendments made herein.

It is respectfully requested that the Examiner consider new claims 39-42 submitted herewith. Applicant asserts these claims are allowable over the patents cited by the Examiner, including the Kricka '366 and Kricka '375 patents for at least the reasons discussed herein.

For new claim 39, the Kricka patents do not disclose the claimed microfluidic device which has microgrooves of the barrier region with a height lower than the first microfluidic region and the second microfluidic region, the barrier region having a width and height that enables the second volume of fluid to be fluidically isolated from the first volume of fluid. For new dependent claim 40, the Kricka patents further do not disclose the claimed microfluidic region that is more than 30  $\mu\text{m}$  high and the microgrooves are less than 5  $\mu\text{m}$  high.

For claim 41, the Kricka patents do not disclose the claimed method including the claimed introducing a biological specimen into the first microfluidic region, observing growth of the biological specimen across the barrier region to the second microfluidic region.

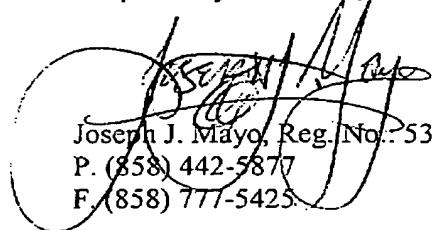
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For claim 42, the Kricka patents do not disclose the claimed method including the claimed introducing a nerve cell into the first microfluidic region, selectively maintaining a treatment in said first and second microfluidic regions as appropriate, and observing the extension of the nerve cell across said barrier region to said second microfluidic region.

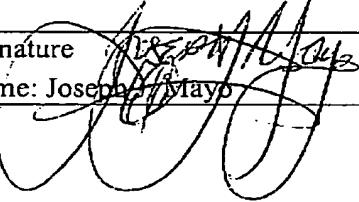
### CONCLUSION

It is believed that new claims 39-42 are allowable over the prior art and over the documents cited by the Examiner and that these claims are now in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,



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| Customer Number<br><b>36067</b> | <i>I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on August 19, 2006 to 571-273-8300 or is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</i> |                       |
|                                 | Signature <br>Name: Joseph J. Mayo  | Date: August 19, 2006 |